

Medical Technology Transfer

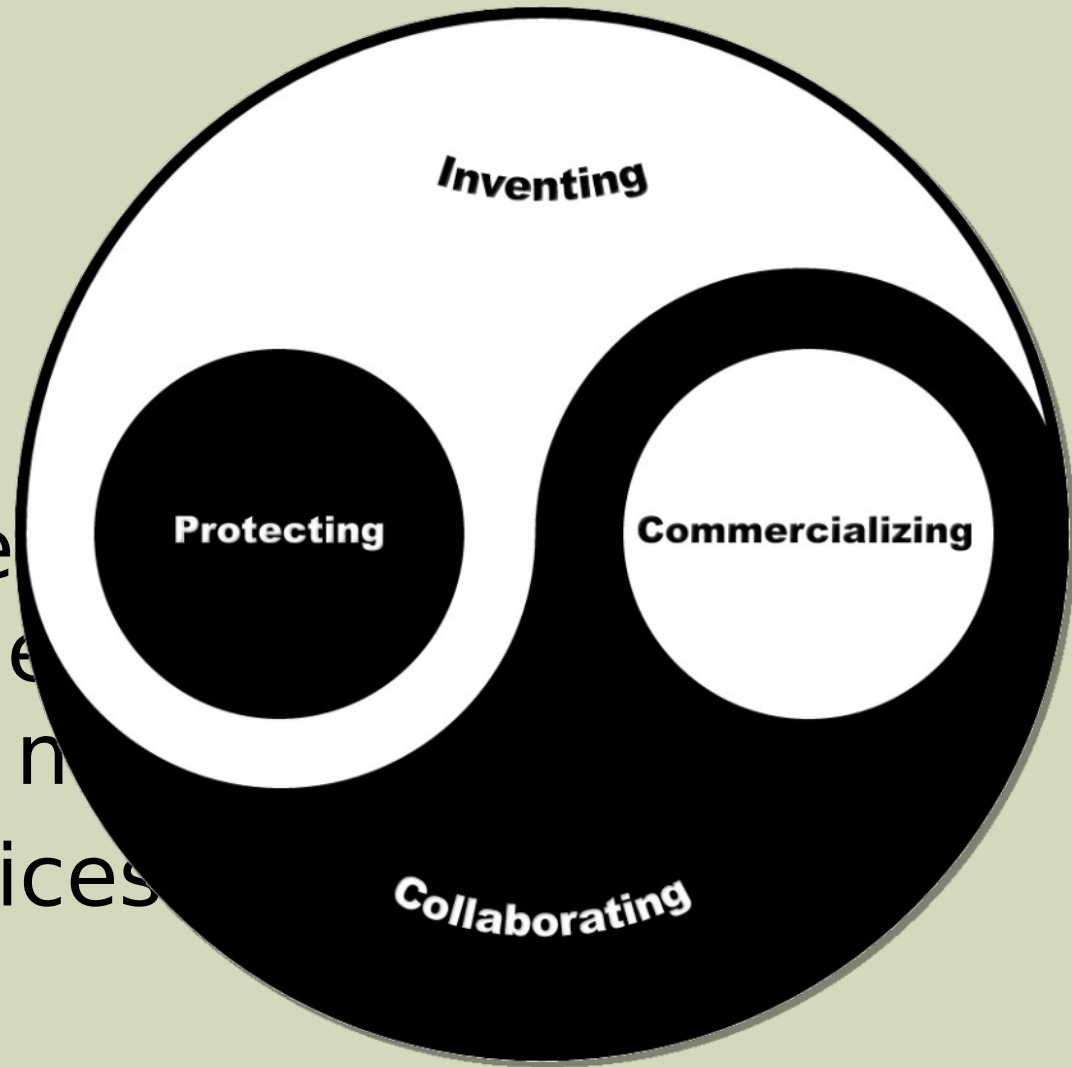
Product Development and Commercialization
Thru Partnering and Licensing

Barry M. Datlof

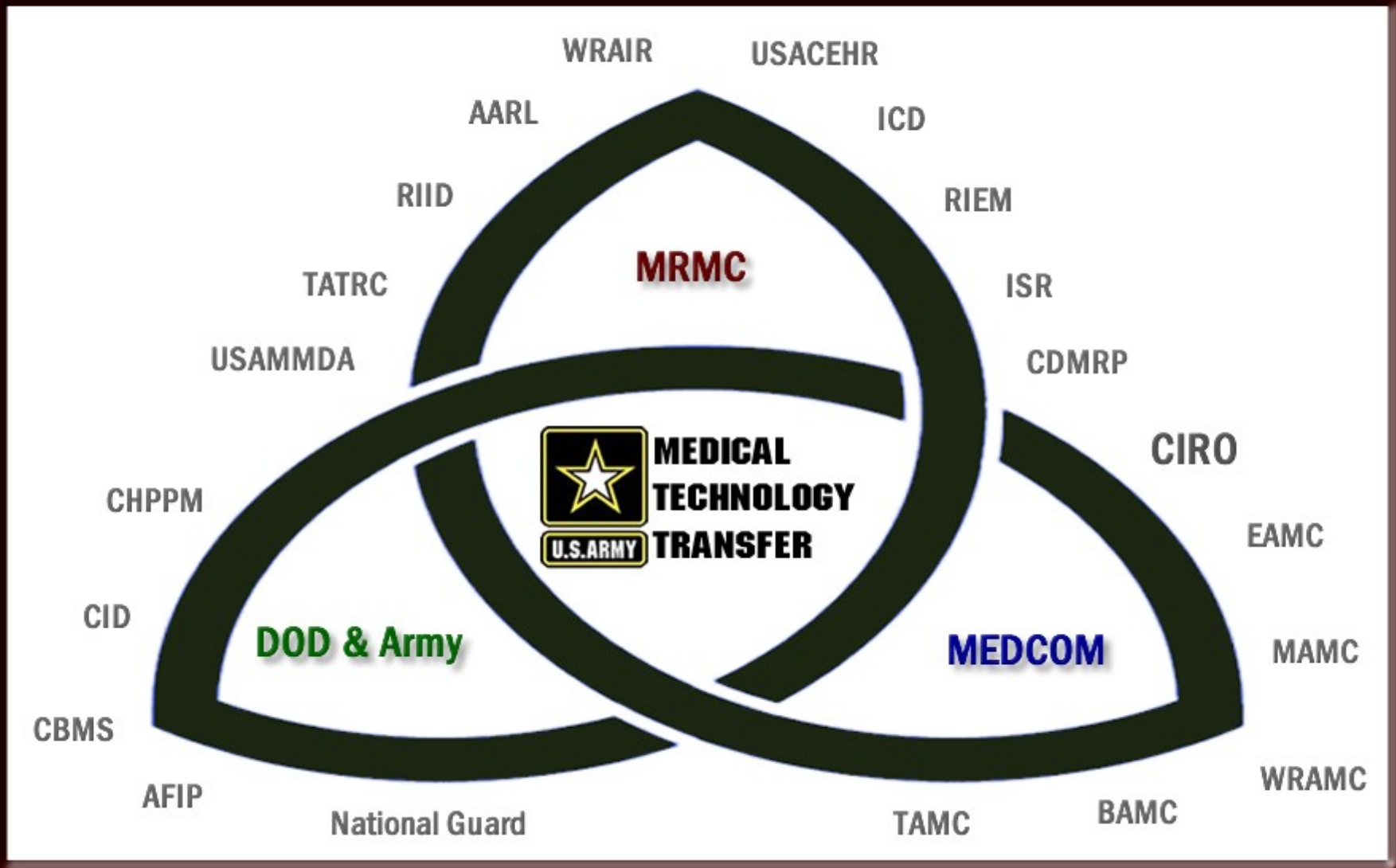
Licensing Officer
Office of Research and Technology Applications
U.S. Army Medical Research and Materiel Command
Fort Detrick, Maryland

Technology Transfer Mission

The exchange of knowledge and materials among cooperating parties for the development and utilization of new products and services



Medical Technology Transfer Partners



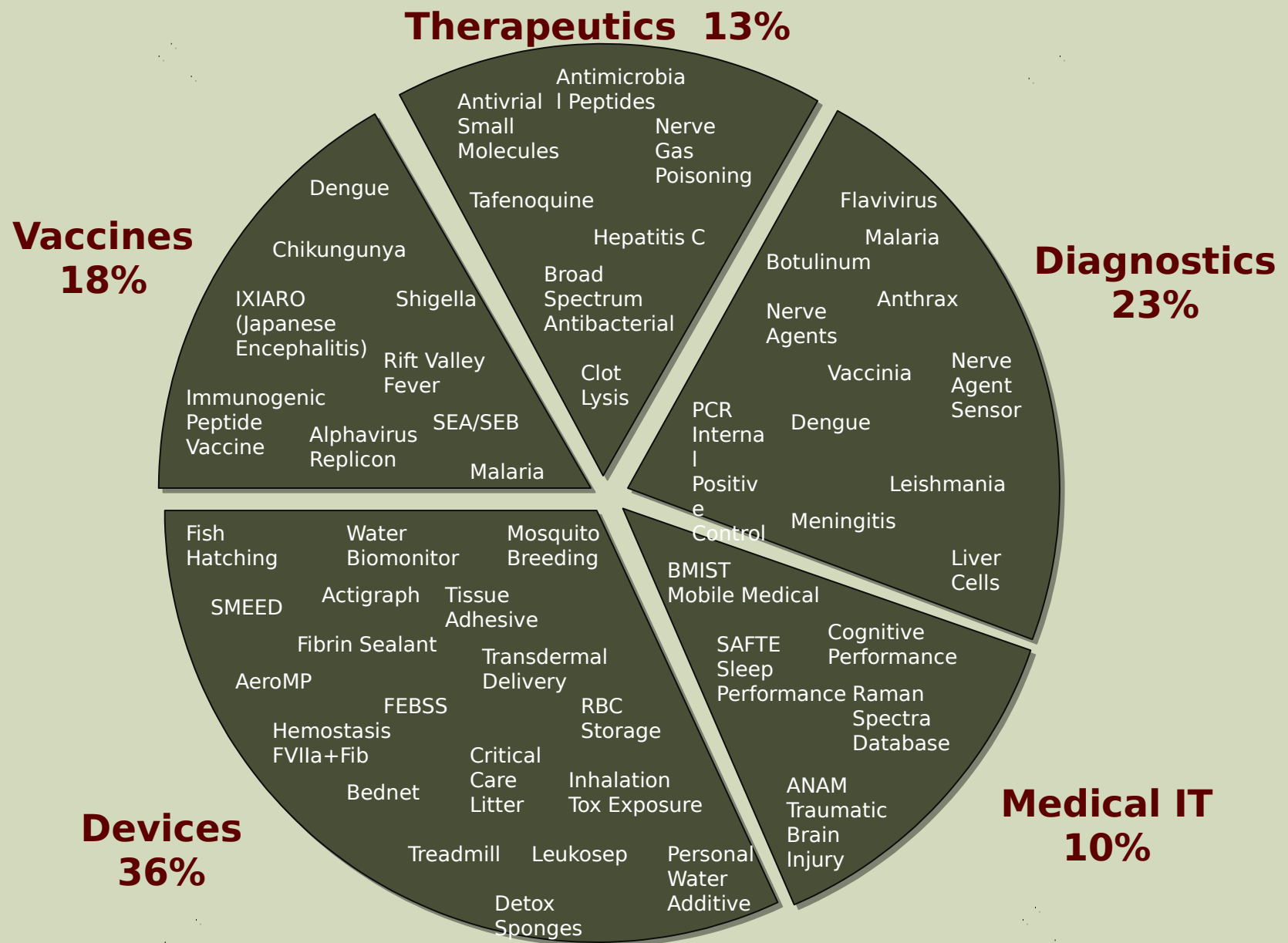
Many Partners Are Leveraged for Technology Transfer

Industry	Partnership Intermediaries	Government	Not for Profits
<p>Startups & Established Companies</p> <p>Biotech</p> <p>Pharmaceuticals</p> <p>Medical devices</p> <p>Diagnostics</p> <p>Consumer products</p> <p>Military products</p> <p>SBIR/STTR</p> <p>Investors</p> <p>Contract Research Organizations</p> <p>Contract Manufacturers</p>	<p>DOD PIAs</p> <ul style="list-style-type: none"> • Techlink • Miltech • Techmatch • Firstlink • Springboard • T2 Bridge <p>Maryland TEDCO</p> <p>University of Maryland InvenioIP</p>	<p>Federal Laboratory Consortium</p> <p>OSD</p> <p>HHS</p> <p>Frederick Innovative Technology Center</p> <p>Ft. Detrick Business Development Office</p> <p>UK Research Labs</p>	<p>Tech Transfer</p> <ul style="list-style-type: none"> • AUTM • LES • T2 Society <p>Tech Council MD</p> <p>Frederick Entrepreneur Council</p> <p>Bio</p> <p>Gates Foundation+</p> <ul style="list-style-type: none"> • Path Foundation • MMV • MVI

Technology Transfer Instruments

- **Patent License Agreements (PLAs)**
- **Cooperative Research and Development Agreements (CRADAs)**
- Material transfer agreements
- Clinical trial agreements
- Test and evaluation agreements
- Technical assistant agreements
- Educational partnerships
- Partnership Intermediaries
- Grants, contracts and cooperative agreements

Licensing Moves A Variety of Products Toward Commercialization

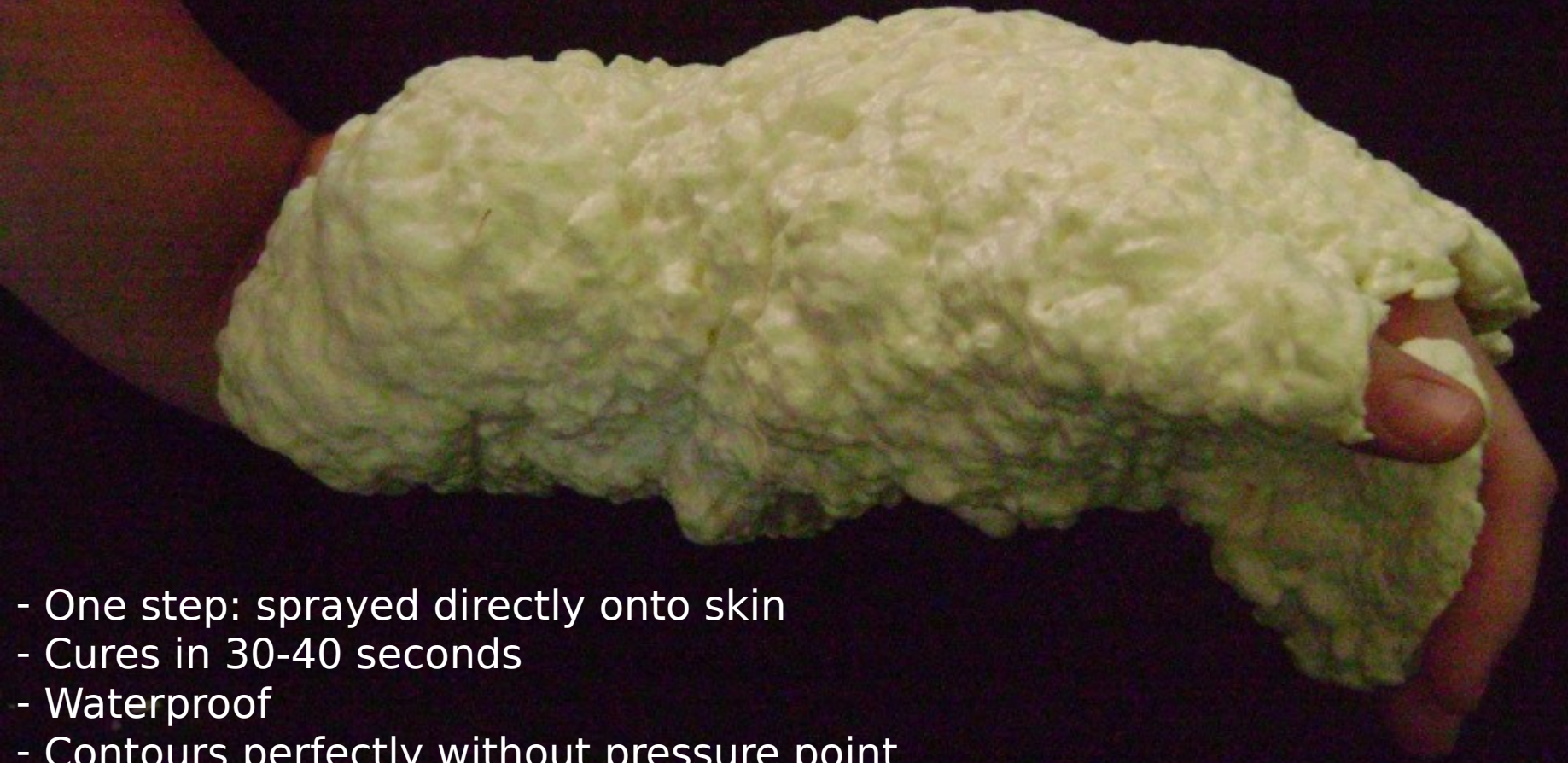


MRMC Licensed Products Are Sold Worldwide

1. Taqman Internal Positive Control for Polymerase Chain Reaction (PCR) assay (USAMRIID, Cepheid)
2. SMEED™ – Special Medical Emergency Evacuation Device (USAISR, Impact Instrumentation)
3. Nerve Agent Sensor (WRAIR, Agentase)
4. AeroMP – Aerosol Control System (USAMRIID, Biaera Technologies)
5. IAC 1090 – Intelligent Aquatic BioMonitoring System® (USACEHR, Intelligent Automation Corporation)
6. Force Sensing Treadmill (USARIEM, Advanced Mechanical Technology)
7. ANAM® – Automated Neuropsychological Assessment Metrics (MRMC, University of Oklahoma)
8. FEBSS – Field Expedient Bleeding Simulation System (EACH, Skedco)
9. Dengue Virus Monoclonal Antibodies (WRAIR, Chemicon/Millipore)
10. Antibodies against Type A Botulinum Neurotoxin (USAMRIID, Toxin Technology)
11. Bednet – Single Person Portable Bednet for Insect Protection (WRAIR, Iguana and MMI)
12. BMIST/AHLTA Mobile – Mobile Medical Record System (TATRC, Vista Partners)
13. SAFTE® – Sleep Model Determines Individual Readiness Levels (MRMC, Fatigue Sciences)
14. IXIARO® – Japanese Encephalitis Vaccine (WRAIR, Intercell)
15. Diazepam AutoInjector (USAMMDA, Meridian Medical Technologies)
16. Vaccine reagents and screening system (USAMRIID, Integrated BioTherapeutics)
17. Biosurety Program Management Software (USAMRIID, Foxspire)
18. MOES™ – Mobile Obstetrics Emergencies Simulator (CIRO, Gaumard Scientific)
19. Hepatitis C treatment (FAMC, SciClone)

FastCast™ Available for Licensing

**Spray foam immobilization cast
for emergency use in the field**

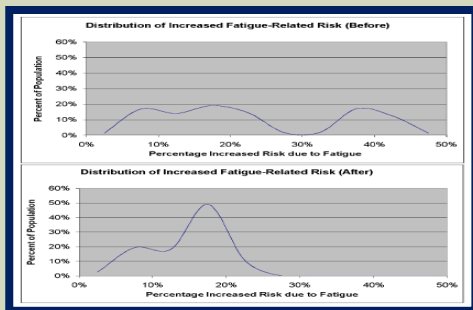


- One step: sprayed directly onto skin
- Cures in 30-40 seconds
- Waterproof
- Contours perfectly without pressure point
- Replaces multiple pieces of medical equipment

Monitoring Combat Readiness

Developed by US Army and Fatigue Sciences

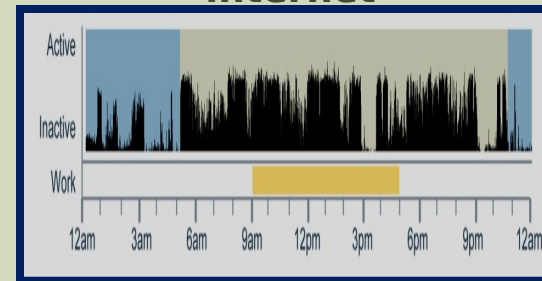
Individual fatigue risk levels are amalgamated into a Group report



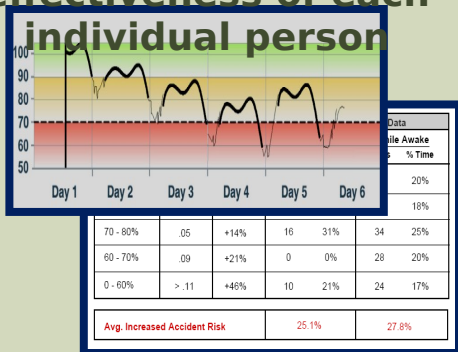
Personnel wear the sleep band that measures wrist



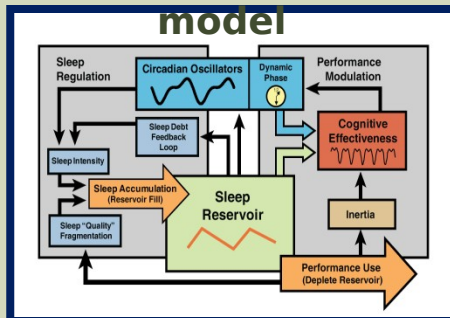
Wrist movements are recorded 24/7 and downloaded over the internet



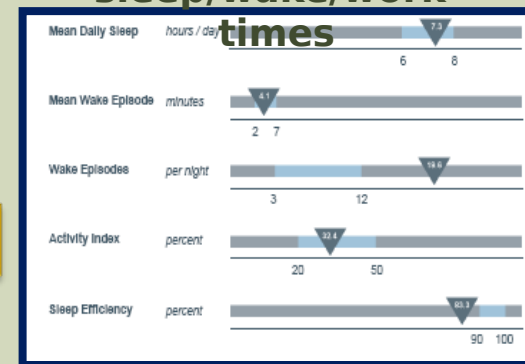
SAFTE evaluates the fatigue risk and effectiveness of each individual person

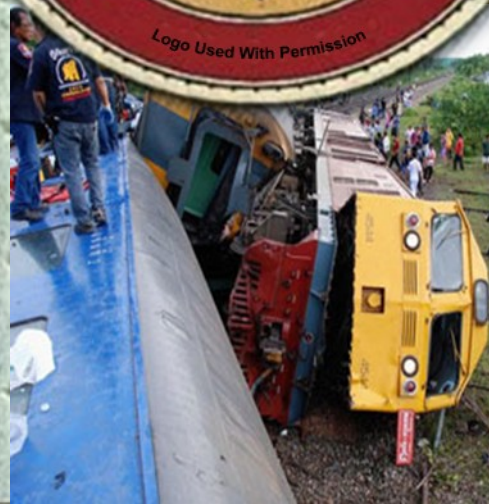
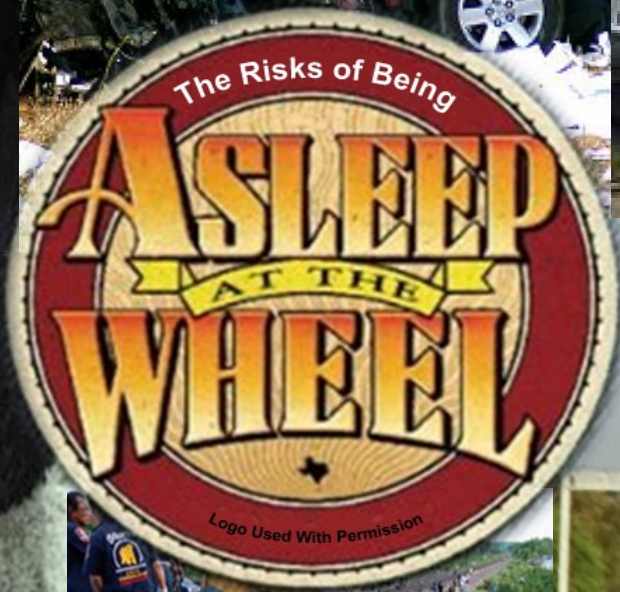
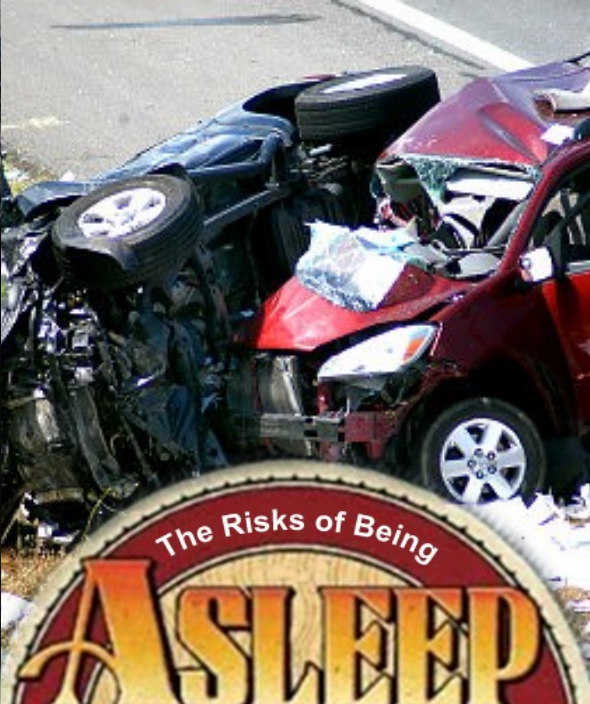


Daily sleep/wake/work times are fed into the SAFTE risk evaluation

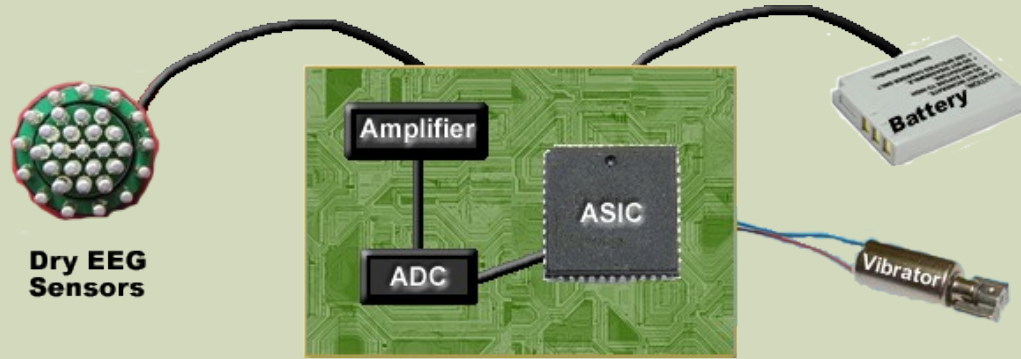


Downloaded data are converted to daily sleep/wake/work times

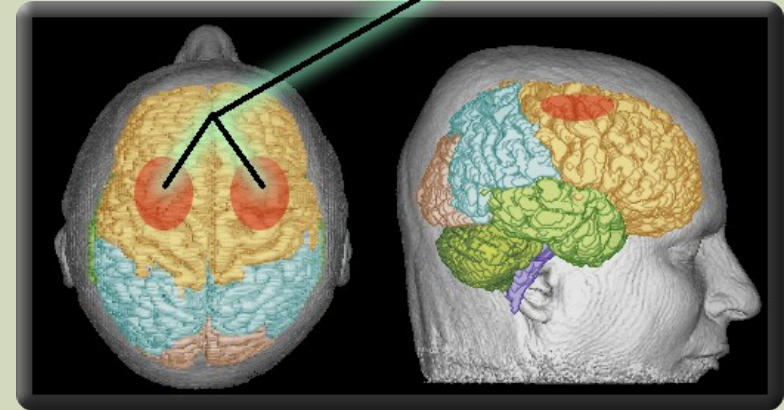




Solution: AlertCap™ Continuously Monitors EEG Brain Waves and Immediately Sounds An Alarm Before You Lose More Alertness



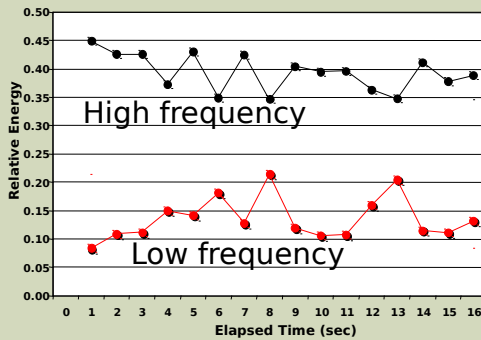
EEG Monitors the C3/C4 Brain Regions



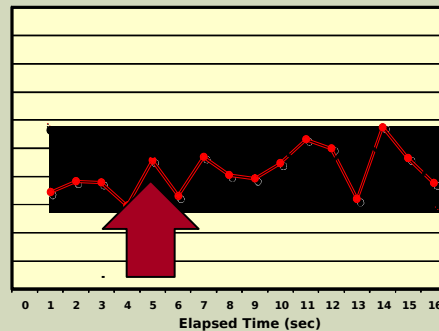
Patent Status:
Application Pending
USSN 339,864

High and Low Frequency EEG Bands

Awake

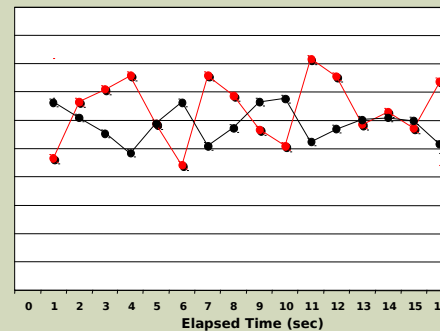


Neutral

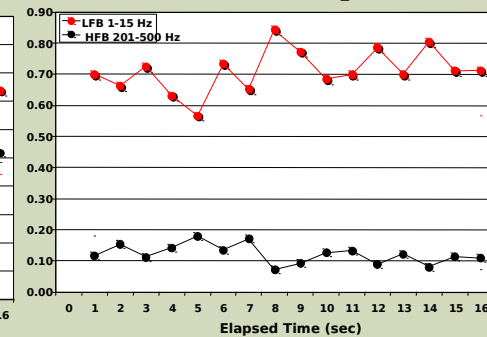


AlertCap™
Buzz

Drowsy



Asleep



Head Nodding

Eyelid Closing

Slower
Reactive
Costlier & more
complicated

USAMRMC

Office of Research and Technology Applications



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